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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,992	02/13/2002	William A. Burris		6883

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EXAMINER

JASTRZAB, KRISANNE MARIE

ART UNIT PAPER NUMBER

1744

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/074,992

Applicant(s)

BURRIS ET AL.

Examiner

Krisanne Jastrzab

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-6 and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 5-6 and 16-17, these claims are still found to be vague and indefinite as the improperly recite method terminology which fail to properly further limit the apparatus claims from which they depend. The language in these claims merely recite the use of previously set forth structure without adding any further structural limitations. Clarification is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Contreras U.S. patent No. 5,824,243 in view of Burris U.S. patent No. 5,207,993.

Contreras teaches a water ozonating system having a corona discharge ozone generator coupled to a water reservoir and pressurized liquid circulation system, to dispense active, disinfecting ozonated water to the circulation lines of a dental operatory unit to kill microorganisms therein. A check valve is provided to ensure that water does not reach the ozone generator, pressure control means are provided including a pump for pressurized circulation of the ozonated water. Control means are further provided to control activation, operation and delivery of the water. Ozone is mixed with the water in the reservoir through a diffuser and the action of the pump means and a venturi. Off gas is captured and returned to the reservoir. See the abstract, column 3, lines 35-68 and column 4, lines 11-20.

Burris et al., '993 teach a water purification device for point-of-use application wherein there is a liquid source, a corona discharge ozone generator, hydrophobic means for preventing access to the ozone generator by the liquid, means for mixing the ozone and liquid, means for circulating the ozonated liquid, means for separating excess ozone gas from the ozonated liquid and destroying that excess ozone prior to atmospheric release, and means for maintaining the liquid source. Burris et al., '993 provide a positive pressure pump for mixing and circulating the ozonated water, while teaching the equivalence of static diffusers and venture means, as well. Burris et al., '993 teach the use of the device for provision within offices or compact location such as

under sinks. See column 2, lines 40-68, column 3, lines 5-35 and 55-68, column 4, line 23 through column 5, line 35, and the figures.

It would have been well within the purview of one of ordinary skill in the art to employ the ozone off-gas destruction means of Burris in the system of Contreras, because it would provide for the safe disposal of that off-gas if the system requires abrupt shut-down which would not allow for the time consuming, natural dissipation of the off-gas as required by return of the off-gas to the reservoir.

With respect to claim 13, it would have been obvious to one of ordinary skill in the art to substitute the check valve protecting the ozone generator of Contreras with the porous, hydrophobic barrier means of Burris because it would provide a more simply means of protecting the generator irrespective of the pressure within the system and without mechanically moving parts.

Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engelhard et al., U.S. patent No. 5,942,125 in view of Burris '993.

Engelhard et al., teach substantially the invention as claimed, namely an ozone generator connected to a source of compressed air and a water line, with means to mix ozone and water to provide an active, ozonated water for distribution to the circulation lines of a dental operatory unit. Pressure control and monitoring means are provided as well as ozone sensors, and the operation of the system is controlled based on those measured parameters. Off gas is sent through means to destroy any residual ozone prior to release to the atmosphere. Means are also provided to protect the ozone generator from contact with water. The ozone generator of Engelhard et al., is an UV

generator. See column 2, lines 33-40, column 3, lines 35-68, column 4, lines 10-20 and lines 31-43, and column 5, lines 10-35.

Burris is applied as set forth above.

It would have been well within the purview of one of ordinary skill in the art to substitute the corona discharge ozone generation means of Burris for the UV generator of Engelhard et al., because of their conventionally recognized functional equivalence.

With respect to claim 13, it would have been obvious to one of ordinary skill in the art to substitute the check valve protecting the ozone generator of Engelhard et al., with the porous, hydrophobic barrier means of Burris because it would provide a more simply means of protecting the generator irrespective of the pressure within the system and without mechanically moving parts.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krisanne Jastrzab whose telephone number is 571-272-1279. The examiner can normally be reached on Mon.-Wed. 6:30am-4:00pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Krisanne Jastrab  
Primary Examiner  
Art Unit 1744

September 15, 2005